

ABSTRACT OF THE DISCLOSURE

An optical device that receives polarization components of input light, spatially separates the polarization components, provides the polarization components with a angles of polarization and directs them onto a reflective element that has a plurality of states. The spatially-separated polarization components are incident on the reflective element with a incident angles of polarization and are reflected by the reflective element with a spatial separation and reflected angles of polarization, which may or may not be the same as the incident angles of polarization. The angles of polarization of the reflected light are a function of the state of the reflective element. The portion of light reflected by the reflective element and the direction in which the reflected light propagates through the optical device can be controlled by controlling the state of the reflective element. The spatially-separated polarization components of the reflected light are combined into output-light polarization components that are at least partially spatially coincident and out-coupled from the optical device. The optical device can be used for various purposes, such as, for example, as a 2-by-2 switch, as an optical attenuator, as a variable beam splitter, for drop-and-continue functionality, etc.

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